IN THE SPECIFICATION:

At Page 7, please delete the paragraph beginning at line 3 and replace with the following paragraph:

$$\text{error} \le \frac{1}{2a_i^2} \times \left(\frac{1}{2N}\right)^2 \; ; \; i = 0,\ldots,N-1; 1 \le a_i < 2 \qquad\qquad (7a)$$

At Page 7, please delete the paragraph beginning at line 14 and replace with the following paragraph:

$$b_i = -\log(a_i) + \left(\frac{1}{4a_iN}\right)^2 - \left(1 + \frac{1}{2N}\right)\frac{1}{a_i} \; ; \text{ and} \qquad\qquad (9)$$

$$c_i = -1/a_i.$$

IN THE CLAIMS

1.   (once amended)   A method for computing an approximation of a natural logarithm function comprising the steps of:

partitioning a mantissa region between 1 and 2 into N equally spaced sub-regions;

precomputing centerpoints a_i of each of the N equally spaced sub-regions, where $i = 0,\ldots,N-1$;

selecting N sufficiently large so that, for each sub-region, a first degree polynomial in m computes $\log(m)$ to within a preselected degree of accuracy for any m within the sub-region, where m is a mantissa of a binary floating point representation of a number; and